



A Study To Assess The Effectiveness Of Educational Package On Knowledge Regarding New Ballard Score Among Nursing Student In Selected Nursing College Of Moradabad.

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ABSTRACT

New Ballard score is a system for evaluating gestational age of a new born baby. The scale can be used for neonates born between 20 and 44 weeks of gestation. This scale is used based on two criteria i.e. physical criteria and neuromuscular criteria. The physical criteria are sub-divided into six sub-categories and these are posture, square window (wrist), arm recoil popliteal angle, scarf sign and heel to ear. And the neuromuscular criteria is also sub-divided into six sub-categories these are lungo, planter surface, breast, eye/ear, genitals (male and female). The score for each ranges from -1 to +5 the score are added together to determine baby's gestational age and total score ranges from -10 to +50. Premature baby has low Ballard score and the babies who born late have higher score. A pre-experimental research design was used to assess the effectiveness of educational package regarding new Ballard score in terms of knowledge of students in selected nursing college of Moradabad. Purposive sampling technique was used to select 60 students. Structured questionnaire was used to collect the data. In pre-test shows that 78.3% of students were having poor knowledge level, 21.7 was having moderate level of knowledge and no one was having good knowledge level regarding New Ballard Score among B.Sc. nursing 3rd year. After educational package on New Ballard Score knowledge level was that 65% students were having good knowledge, 35% was having moderate knowledge and no one was having poor knowledge. Regarding knowledge the mean post-test knowledge score (8.5167+2.988) after need based education is greater than the mean pre-test score (22.166+3.221). The calculated 't' value ($t=31.6493$, <0.05) was higher than the tabulated value ($t_{59}=2$, at $p<0.05$ level).

Key words – effectiveness, knowledge, Ballard score, nursing student.

INTRODUCTION

Assessment of gestational age of baby can be done using "New Ballard Scale"¹. It was developed by Dr. Jeanne L Ballard Professor Emeritus of Paediatrics, Obstetrics and Gynaecology at the University Of Cincinnati College Of Medicine, in year 1979.

PHYSICAL MATURITY:

1)Skin texture: as the gestational age increases skin becomes less transparent and tougher, and after the 36-37 weeks of gestation skin transparency loses, all the underlying vessels are no longer visible and subcutaneous tissue increases.

2)Laungo: it means a dense cottony growth of hair on baby's skin. It disappears within 28 weeks from face and anterior trunk and term infants may have only few patches on the shoulders.

3) Planter surface: it involves the assessment of presence of creases on the planter surface of the baby's feet. At the 28-30 weeks gestation it appears on the anterior portion of the planter surface. After 12 hours of gestation this aspect of gestational age assessment is invalid due to drying of the skin.

NEUROMASCULAR MATURITY:

1) Posture: it involves the assessment of posture and tone of infant when infant is in the rest position, the term newborn has flexed posture and the preterm newborn has extended posture.

2) Square window (wrist): it involves the assessment of flexibility of the wrist the examiner strengthens the infant's fingers and applies gentle pressure on the dorsum of the hand, close to the fingers. In preterm newborn the angle between the palm and forearm of the infant is more than 90 degree and in full term infant the angle is 0 degree.

NEEDS OF STUDY

Global incidence of preterm baby is about 11% i.e., approximately about 15 million babies are born preterm annually throughout the world. Preterm baby is said to be those babies who born before 37 weeks of gestation period. About 1 million under 5 children are died due to prematurity i.e., about 18% of all under 5 children death and about 35% children at <28 weeks of age. The burden of preterm birth is more in middle- and low-income countries like Southeast Asia and Sub-Saharan Africa.

Incidences of prematurity among new born baby are also increasing in some middle- and high-income countries like America i.e., about 9%. Preterm birth directly causes infant mortality i.e., death of neonate about 27%. Preterm birth is also a ruling risk factor for neonatal mortality.

PROBLEM STATEMENT

A study to assess the effectiveness of educational package on knowledge regarding new Ballard score among nursing student in selected nursing college of Moradabad.

OBJECTIVES OF THE STUDY

- To assess the knowledge of nursing students regarding Ballard score before and after educational package.
- To evaluate the effectiveness of educational package on knowledge regarding ballard score among nursing student.
- To find out the association between the knowledge of nursing students regarding Ballard score and with their socio-demographic variable.

HYPOTHESIS

H1- There is a significant difference between the pre-test and post-test knowledge regarding Ballard score among nursing student at selected college of nursing, Moradabad.

H2- There is a significant association between the level of knowledge regarding Ballard score among nursing students and with their socio-demographic variable

METHODOLOGY

RESEARCH APPROACH: -

Quantitative research approach was adopted for this study.

RESEARCH DESIGN: -

pre-experimental research design



O1: Assessment of knowledge regarding New Ballard Score among students of B.Sc. nursing in selected nursing college Moradabad.

X: Educational package regarding New Ballard Score used for gestational age assessment.

O2: Assessment of knowledge regarding New Ballard Score among students of B.Sc. nursing in selected nursing college Moradabad.

VARIABLES: -

1. Independent variable: Educational Package on Ballard Score.
2. Dependent variable: B.Sc. Nursing 3rd year in Selected Nursing College.
3. Demographic variable: Code number, age, gender, type of family, religion, area of residence.

STUDY SETTING: -

The study was conducted in Teerthanker Mahaveer College of Nursing, Teerthanker Mahaveer University, Moradabad, U.P.

POPULATION: -

The study population for present study was students of B.Sc. Nursing 3rd year.

SAMPLE: -

Students of B.Sc. nursing 3rd year

SAMPLE SIZE: -

The sample size is 60 students of B.Sc. nursing 3rd year.

SAMPLING TECHNIQUE: -

Convenience Sampling Technique

SELECTION CRITERIA: -

1. Students who are of B.Sc. nursing 3rd year.
2. Students who are available and willing to take part in the study.

RESEARCH TOOLS AND TECHNIQUES: -

The following tools are included in the study:

1. Socio-demographic variable
2. Questionnaire on new ballard score

DESCRIPTION OF TOOLS: -

Research tool is one of the important aspects of any research study.

Tool 1: part I socio-demographic variables

Socio-demographic variables or data include items to collect background of the sample. It included age, gender, type of family, religion, area of residence.

Tool 1: Part II Knowledge Questionnaire regarding New Ballard Score Questionnaire consists of 30 questions concerning general information of new Ballard score and its component. Each question has four responses and it basically consists of 3 areas as follows

- General introduction regarding New Ballard score (7 questions)
- Physical maturity criteria (10 questions)
- Neuromuscular maturity criteria (13 questions)

Total obtained knowledge score between 0-10 was considered as poor level of knowledge, obtaining score between 11-20 was mentioned as moderate level of knowledge and between 21-30 was considered as good level of knowledge regarding new Ballard score.

PRESENTATION OF DATA

Data presentation is done in two sections:

1. Section A: description of demographic profile of study participants.
2. Section B: analysis based on objectives of the study.

Section A: Description of demographic profile of study participants.

Table no.1: Frequency and percentage distribution of socio- demographic variables of students.

N= 60

➤ Results show that, more than half (76.7%) students were in the age group of 21-23 years, (15%) belongs to the age group of 18-20 year and only (8.7%) belong to the age group of 24-26 years.

➤ Regarding gender of the student's half of the sample included in this study is female (65%) and half population is male (35%).

➤ Regarding type of family (43.3%) students living in the nuclear family and other (56.7%) students living in a joint family.

➤ More than half of the students of my sample was Hindu (63.3%), (36.7%) students was Muslim and no one belongs to Christian and other religion.

➤ 60% of the students of my sample were living in urban area, 38.3% is living in rural area and only 1% of total sample is living in semi-urban area.

Section C - Effectiveness of educational package on knowledge regarding new Ballard score

N = 60 (21E+ 39C)

S.NO.	KNOWLEDGE SCORE	MEAN±SD	MEAN DIFFERENCE	't' VALUE	p-value
1	Pre-test	8.5167±2.988	13.65	31.152	0.00 *
2	Post-test	22.166±3.221			

***Significant at 0.05**

SECTION D- Association between the knowledge of nursing students regarding New Ballard Score with their socio-demographic variable.

S.N O.	SOCIO-DEMOGRAPHIC VARIABLE	MODE RATE	POOR	CHI - SQUARE	p-value	d.f.
1	AGE a) 18-20years b) 21-23years c) 24-26years	4 9 0	5 37 5	4.25 4	0.119	2
2	GENDER (a)Male (b)Female	8 14	13 25	0.02 8	0.866	1
3	TYPE OF FAMILY (a)Nuclear (b)Joint	8 5	26 21	0.16 0	0.689	1
4	RELIGION (a)Hindu (b)Muslim (c)Christian (d)Other	8 5 0 0	30 17 0 0	0.02 3	0.879	1
5	AREA OF RESIDENCE a) Rural b) Urban c) Semi-urban	7 6 0	16 30 1	1.84 9	0.397	2

Table no.4: Shows that there was no significant association of post-test knowledge of nursing students regarding Ballard score and previous knowledge (0.05).

CONCLUSION

The overall findings of the study clearly shows that the students have good level of knowledge regarding New Ballard Score after educational package on New Ballard Score among B.Sc. nursing 3rd year students in selected college of nursing Moradabad, $U > P$ therefore similar study can be replicate on a large sample to generalize the findings and further more studies are required to provide knowledge regarding New Ballard Score among nursing students.